The Role of *Making the Stuff of Life* in Place-Based Education

By Zabe MacEachren

Homes and classrooms today are full of items that give no clue as to their origin or that of their components. Plastic packaged goods comprise a mixture of multiple-sourced materials. As a result, such items appear to be global in origin, not from any one place. Goods such as cell phones, computers and even school desks seem to be the result of manufacturing processes that fail to reflect an actual place, a seed of genesis so that understanding can take root. Indeed, stuff today is such a conglomerate of materials that even the idea of a source of origin remains elusive. If we live in an environment defined by these items it does not seem strange that so much dialogue about attention deficit disorders, hyperactivity and obesity resounds in modern society, including educational settings. Surrounding ourselves with synthetic provenance limits and undercuts the understanding of our place and ecosystem. As a result, our idle hands have little means to comprehend the world and come to know the land through meaningful playing such as shaping a toy, let alone a functional tool for daily use. This article examines the role material culture and making items can serve in establishing a sense of place or informing place-based educational practices. It is arranged around six principles that, if used in a learning context, connect material from a place to an enhanced comprehension of a sense of place. In doing so, we can learn to build our world ourselves using the contextual meaningful familiar rather than tin tabulation of culturally bankrupt objects.

It was just a few generations ago that everything in a home (or classroom) could be replicated by its occupants. Without television people spent evenings carving wood gathered in their back 40 and knitting wool from sheep they had raised since birth. The experience of making the items used in their daily lives shaped their sense of the place in which they lived and fostered a sense of connection with and dependency upon that place. Local forests were understood by the type of trees growing there and each species' unique features suitable for making homes, furniture, tools and so on. Local tree species were also known for the qualities they offered when cooking, curing or smoking various foods. The ground was understood for its chemical makeup in terms of which soil was best suited to growing root crops or corn, and which was best for pasture, not to mention as a source of clay for cookware and minerals that could be mined to be used for colour glazes, fertilizers and more.

As outdoor educators I think it is important to ask what practical skills students require for good living and to offer students the opportunity to learn these skills in the context of an actual setting. Such experiences should embed them in a context of an outdoor place.

In Lee Marcle's article on education, handmade items that allowed people to live in a place well are referred to as the "stuff of life." Marcle outlines how it is the actual skill of making the stuff of life that is important in education, rather than the abstract ideology in which higher education takes pride (1996, p. 88). This distinction is important to emphasize as the experience of making functional items required to live provides a critical understanding of the role place plays in one's living, and specifically the places that provide the "raw material" for the making process. Learning to extract and handle the raw material of living can result in a critical educational experience that supports the understanding of how to sustainably live well in a place.

A critical component in making the stuff of life includes shaping and making practical items like tools, food, shelter and clothing. Contemporary place-based educational practices frequently emphasize connecting children with their food through gardening activities (Stone, Barlow and Capra, 2005; Sobel, 2004, 2008), but this article emphasizes

that making practical items from local material is also a valuable way to begin learning about the place where one lives. Tools are required to plant a garden, so beginning with an exploration of how to make a suitable digging stick may be just as important as planting a seed in a plastic cup. Gardening is a wonderful experience. We all like to eat our homegrown produce, but understanding how to make durable gardening tools is an integral part of the totality and equally informative, and such a task can immediately involve a person with examining place in an intimate and practical manner. Learning to design and make practical items, just like acquiring food, creates a fundamental way of addressing the world because making the stuff of life requires a very hands-on, sensory way of knowing the materials one uses and the places the material originates. Making the stuff of life shows us the role our opposable thumbs have held in regard to our survival in specific regions because each region offers various materials and thereby requires various handwork skills and knowledgeable designs adapted to both local material and terrain. What follows are some guiding principles that can be used to enrich the context of place during making experiences focused upon the stuff of life.

1. Learn to utilize local material for making functional items

The spoon is the first tool most people learn to handle as a young child. Learning to make a spoon in one's youth ought to be considered a mandatory educational activity and serve as an appropriate beginning to examine the connection between our material world and place-based curricula. Walk out into a nearby natural area, look around and think about what material is available to use and might be suitable for spoon making. In some parts of the world cutting bamboo or attaching a coconut shell to a stick might provide a readily accessible spoon. I once observed an Anishinabe elder create a workable spoon out of folded birch bark in a few minutes. Bamboo, coconut shell and birch bark all are very place-specific materials. For a durable carved spoon, various local tree species will provide different types of wood and correspondingly different results. I have witnessed numerous teacher candidates carving a spoon out of an evergreen branch only later to realize that coniferous trees leave some unique and often undesirable tastes in the mouth. The relative ease of carving and the resulting blisters earned in the process emphasize that paying attention to what local species are considered hard and soft woods is fruitful. To eliminate the possibility that applying one's effort and creativity will only result in producing a cracked and thus useless spoon, it helps to have knowledge of the local atmospheric humidity and the way in which this will impact how spoons carved with green wood are best dried.

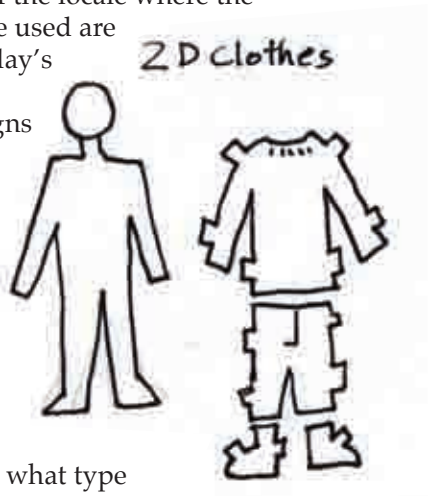
The local species that will provide the most suitable working material for an item differ from region to region; students should become familiar with handling material available in their specific bio-region. Understanding local materials makes the substitution of material from other areas more meaningful by establishing a context for understanding what is exotic, acknowledging concerns about introduced species, and questioning the ecological footprint resulting from the use of inexpensive, possibly exploitatively sourced, foreign material. Lacking a familiarity with local material may leave a person to never question the reality and implications of going to a big-box store to purchase wood or other supplies, often from distant lands, or to consider the social and economic factors that allow foreign material to be cheaper. An appreciation for local material is best developed by intimately handling the material in the region in which it was gathered in order to make a utilitarian item to be used in the same region. Frequently passing the stump of a tree utilized for

carving projects provides rich opportunities for reflecting on the ways a place supports one's personal life. The handling of local material when making functional items is fundamental to developing a sense of place through the material world.

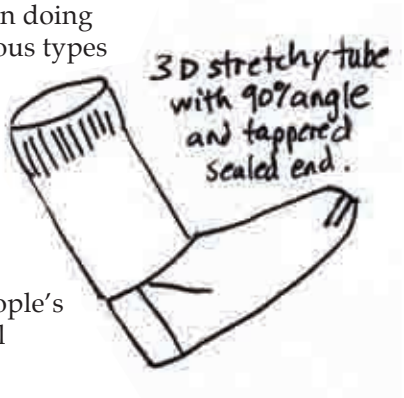
2. Understanding the way design is dependent upon and derived from bio-landscapes

The emphasis in today's society on profit and innovation means that many people have ceased to recognize the value in basic forms and designs of the past. All too frequently people set expectations for themselves of creating and improving upon old standard practices that have served the test of time before they even understand the reasons these standard practices worked (Langsner, 1995, p. 61). It may seem that in these times of rapid technological development survival may be based upon the need for quick adaptation and changes, but the value of why traditional practices served their generation should not be readily ignored or forgotten. Changes may best only be encountered at the rate of growth of local plant species. According to Coperthwaite, "Each group of people in the world is a repository of folk knowledge that is their inheritance from previous generations. Such knowledge is a valuable resource for all of humanity. Whether this be knowledge of child care, gardening, human relations, or tool design, such knowledge needs to be gathered and studied for its value . . ." (2002, p. 14). Place-based educators require curricula that address the maintenance of folk knowledge residing in the practical wisdom of people. People have been well served by specific designs as manifested in their material folk culture. If true knowledge of place is to be had, design features must be understood in part by the linkage to specific bioregions. To illustrate this type of knowledge, recall the maps that link various designs for snowshoes or canoe/boat shapes with different Indigenous groups residing in regions of Canada. The degree to which we can readily explain the reasons for each different design, or its fit with a corresponding landscape feature, represents our knowledge or lack thereof of the connection between design and place.

A place-based educator can use these maps of material culture to examine why such different designs arose in different cultures and specifically how regional designs were reflective of local landscape and weather conditions. For instance, an upturned snowshoe tip works well in northwestern Ontario where much of the winter lake travel condition involves a crust of snow. The upturned toe design allows a person in this region to ride above the snow crust with each step. In contrast, the same upturned tip would be a hindrance in the Algonquin Park region because it would limit the wearer's ability to climb the numerous slopes. Regions where slush is a common lake occurrence means a traveler would benefit most from a snowshoe weave with wide holes in its rawhide lacing thereby allowing slush to be readily knocked off. In Eastern Canada, snow is typically dryer, and a tight weave offers ideal floatation with minimum weight. Such linkages between the design and the conditions of the locale where the item is destined to be used are frequently lost in today's consumer market. Advertising campaigns are designed to benefit shareholders as they incorporate large-scale generalizations and thus ignore regional differences and weather patterns.



Today, a good sales person will ask what type of canoeing you plan on doing before suggesting various types of boats designed for whitewater, easy portaging, rocky bottom and your wallet size. The promotion of specific canoe designs is only possible because of people's general ability to travel



anywhere to fulfill their canoeing preference. If we were limited to only paddling in our nearby water tributaries, our canoe choices would be different. An indigenous mindset to making a boat would include examining the designs ancestors used and understanding why such designs best suited local paddling conditions. Attending to and examining the reasons for various folk designs served as a maker's introduction to his/her ancestors' wisdom in regards to local travel conditions and the limitations of local material in fashioning tools that fulfilled daily needs.

Birch bark Storage

Which brings us to this point: Designs can be influenced by local conditions or the limitations of local materials. To illustrate, the following question can be asked: Why did Scandinavian countries develop ways to use birch bark that differ so much from those of First Nations people in North America? Place-based educators should aid students to understand the link between design and bio-landscape before concentrating on innovative new ideas. Innovation is important, but even in today's world of global markets there are many occasions when local markets and local materials provide the best personal satisfaction because they reflect a person's awareness and desire to intimately fit with a place.

Pack Baskets

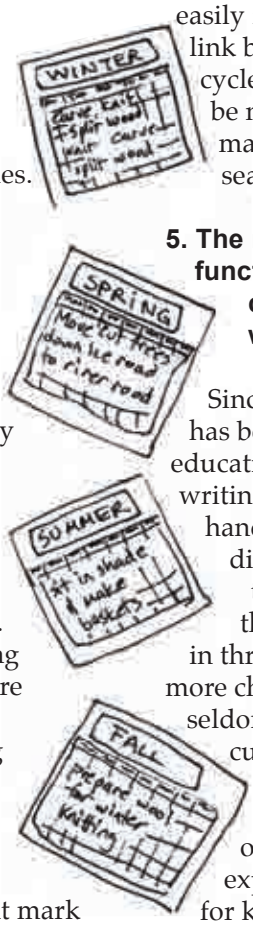
3. Seek to harvest materials in a sustainable manner

The decision to use local materials when making items provides a firsthand opportunity to foster an understanding of sustainability. Frequently, the local harvesting of material from an area allows a person to realize the impact of the process on the environment. For example, a basket maker needs to learn the growth rates of various plant species in order to determine the frequency with which s/he can harvest material from the source. Returning to the site in which a tree was cut to make something provides the opportunity to observe the stump's composition rate and the rate at which saplings take advantage of the new patch of sunlight in the changing forest canopy. It is tantamount that educational experiences involve returning to the same place materials were harvested in order to understand growth rates and limitations required in establishing practices and boundaries for sustainable living. Purchasing all items in a home versus making them oneself shields a person from embodying and truly understanding that actions create an impact on the land. Removing plants and animals from a local area in order to make the stuff of life can allow one to develop a sense of care and compassion, especially when this practice is well mentored. The result can be that plants and animals are harvested humanely, with minimal impact and a sense of care for the bio-landscape upon which the harvester depends.

4. Examine the diverse seasonal influences on the creative process

Multiculturalism has introduced many wonderful new rituals and practices to contemporary Canadian society. However, all too often the reasons diverse practices of making originated in specific regions of the world are forgotten or downplayed. Today's world of instant mobility and indoor central heating and cooling makes it easy to forget that different places have different seasonal cycles that impact the availability of different materials and the resulting practices for making things. Traditionally, making activities frequently followed seasonal and regional cycles on a calendar. As every maple sugar tapper knows there is a link between places (where maple trees grow) and seasonal cycles (the first few weeks of warm days and cold nights) that play a role in determining daily activities. Birch bark can only be peeled from trees in the spring, which meant that in former times canoe building and basket making was dependent upon a late spring outing to a local birch

grove to collect supplies for the rest of the year.



Place-based educator, determining the parameters of a seasonal calendar for a involves many different types of events and activities. Various making practices shape a seasonal calendar in contrast with the Gregorian calendar's arbitrary monthly divisions. For nomadic people it was difficult to determine solstice dates exactly because the sun rise and set locations on the horizon were experienced differently in different locations. In Northern countries the freezing and thawing of the nearest lake served as a more accessible seasonal event and was an anchor for determining a meaningful calendar of local events. Ice and open water involves differing means of travel and influenced where and when local material could be transported. The white pine logging industry was based on using the spring ice break-up and the consequent high water levels allowed the floating of large timber. This seasonal event was a significant mark on their place-based calendar. In a classroom participating in a Monarch butterfly curriculum, a corresponding winter activity that involves making rope with fiber from the remaining milkweed plant stems could be noted on a calendar. As is the case with flax, hemp and other fibrous plants, there is an optimum time when the fibers in the dry stalks have not rotted so much as to weaken the fiber, yet still allow the fiber to be separated from the stalk.

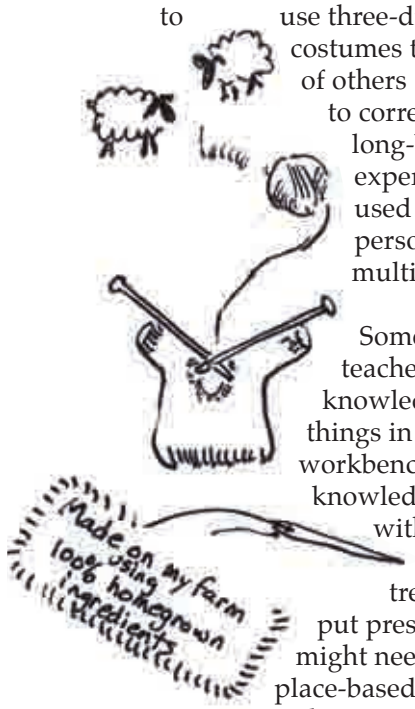
One interesting craft making practice that reflects a specific sense of place(s) is the traditional Inuit belief that caribou skins should only be sewn into clothing while on land. This practice seems to honour both a dependency on the animal and the place the animal lives. Caribou hides could only be worked on land and sealskins were only to be worked in winter when life was based upon sea-ice (Sperry, 2005 p. 41). Recognizing a place's unique association with seasons and corresponding seasonal making activities is easily forgotten today. By re-establishing the link between making events and seasonal cycles, place-dependent routines can be noted on our calendars and used as maps to aid us in exploring place-based seasonal occurrences.

5. The role of dimensional progression in functional expression (Experience the challenges of 2D and 3D landscape work)

Since paper was developed and has became readily accessible as an educational medium (supporting reading, writing and drawing), the experience of handling, learning and thinking in two dimensions has taken preference over the handling and manipulating of three - dimensional objects. Working in three, versus two, dimensions is much more challenging, yet this distinction is seldom acknowledged in post-modern curricula that is very much based on paper-oriented tasks and cognitive development. Ask yourself which offers a more stimulating educational experience: first, reading the directions for knitting socks and their history; two, drawing an illustration of socks; three, recording a pattern for turning two-dimensional fabric into a right angle tube, with one end sealed for your toes; or, four, demonstrating that you can knit socks by first twisting wool fiber into long strands by spinning and then using your two hands to manipulate four wooden sticks into continuous interlocking loops of yarn that make a stretchy tube shape with a 90 degree angle that fits your foot. Making the stuff of life requires a demonstration of knowledge that arises from an articulation of one's body in conjunction with earth materials in order to produce what is more often than not a functional three-dimensional form. Places are seldom flat like paper and similarly clothing our three dimensional bodies well takes a lot of design understanding.

Experiences are multi-dimensional, yet many educational experiences are limited to two-dimensional paper representations. A

sense of a place, like an ecosystem, requires perception and reflection of many angles and dimensions. Working with three-dimensional forms through making experiences provides stimulating cognitive experiences that encourage a natural comprehension of multiple dimensions. Working with plant materials from a place directly requires careful observation of the stuff of places that can lead to an understanding of the connection between complex life patterns. The opposing branch pattern of a tree creates a specific wood grain pattern that can be used to create strong joints in carpentry projects. In Waldorf education students are encouraged to touch and handle various forms of spoons and scoops in order to determine what handle form best serves the desired action. A fit between hand, action and material is ultimately sought in tasks like scooping or stirring (Martin, 1999, p. 58). Discussing how bird's beaks and body shapes allow them to feed on specific food in various ecosystems is a common activity at outdoor centers. Similar knowledge concerning our material world is best assimilated when our bodies are allowed to use three-dimensional tools and costumes to replicate the forms of others (nut cracker and straw to correspond with thick- and long-beaked birds). Similar experiential activities can be used to highlight the ways a person's body is a functional, multi-dimensional tool.



Sometimes I discuss with teacher candidates the bodily knowledge required to make things in the field without a workbench, table or clamp. Such knowledge invites experiments with using our body in conjunction with local trees to hold, pry and put pressure on the wood we might need to shape. Confining place-based education to activities emphasizing only two dimensions is like drawing a map on paper and expecting it to accurately describe our home. Such a map can serve as a simplistic representation but its limitations should also be recognized. As we do not live two-dimensional lives in two-dimensional places a map can hardly be considered accurate. Like clothing, paper maps are simply two-dimensional coverings that have been adjusted into multi-dimensional forms. A variety of clothing is required to keep our body comfortable during all the seasons of a place. Correspondingly educational practices, of a place, need to offer multi-dimensional experiences in order to aid us in adapting our common practices with material culture to fit daily life in a place.

6. Encourage place-based iconography

To counter-balance the onslaught of multi-national corporations' media campaigns, students should be encouraged to develop their own slogans of a place-based iconography. A heavy wool sweater with a palm tree decoration on it is just as bizarre as wearing the corporate global symbol of NIKE on a handmade fringe leather jacket. Similarly, placing pictures of teddy bears and Disney figures on children's clothing should be questioned for its manner of distorting and limiting their understanding of real bears and local places. Students can benefit by focusing their ability to be aware of local natural features to the extent they can truly determine what features distinguish their place from other places. These distinctions can then be used to establish an appropriate iconography of a place. School mascots should be of animals or plants that live nearby (or historically lived in the area.) Just like young children should not be introduced to devastating environmental issues, they ought not be introduced and encouraged to study the mega fauna of distant lands before they know the fauna of their own place.

Pride, respect and love for one's place will not develop without a deep awareness of that place and the connection that comes from representing that place in icons that reflect local bio-landscape. Sometimes craft patterns names reflect a local natural feature. It can be a very engaging experience to connect natural features into artistic patterns that are then used to develop a sense of

identity that serves to blend self with a place. For instance, the Anishinabe people created a ribbon design that they called the Otter track. The diamond patterns of this design mimics the short hops and then long slide track that otters leave when travelling down a frozen lake. Exercises that involve simplifying natural forms, like repeating five green radiating lines to mimic white pine needles, can evoke a pleasing familiarity or fondness for this tree and constitute an activity that can be used to develop personal marks that can substitute for signatures. Limiting exposure to both written and global icons while establishing boundaries that encourage an awareness of local landmarks serves as a uniquely, creative practical lesson for place-based educators.

Conclusion

Education that enriches our sense of place will flourish when curriculum activities involve making the stuff of life from the material available in the very places we live. By recognizing and then fulfilling the need to make the practical items of daily life, the experiences that focus on the forms and designs that have served our ancestors so well can once again become common knowledge. Gathering material in an appropriate fashion fosters an understanding of place-based limitations and encourages the development of sustainable practices suited to a specific locale. Awareness of seasonal patterns and the way they influence practices and designs heightens a person's sensation of being of and from a place because totality and intimate experience is appreciated and acknowledged every time made items are utilized. Handling tangible forms from various perspectives adds multi-dimensional qualities and complexity to our comprehension and best reflect human's unique relationship with the land and the skills made possible by our physiology (such as opposable thumbs.) Unique landscape features help develop a sense of pride and honour in the local landscape, especially when regional iconography takes precedent over global icons. In our quest to connect students with places and foster a sense of community that includes the local ecosystem, it is critical that we acknowledge that humans need material things in order to live meaningfully in this world. These material things are the very stuff of life. As students examine what practices and materials are involved in making the stuff of life, they become fulfilled and contextually empowered by understanding, designing and ultimately making things in a way that supports life as they have come to recognize it in a place. The bounty of sustainable resources that our place has to offer for making can be closely partnered with an awareness of the limitations that must be imposed when harvesting things. This awareness can become part of our learning and teaching about ways to best support life in a place. Making the stuff of life is like asking a guide to take us to the place of understanding—to immerse us in the land we depend upon to live.

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